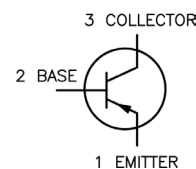
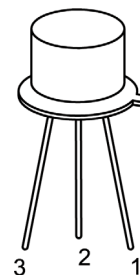


Power Transistor



RoHS
Compliant



Pin Configurations:

1. Emitter
2. Base
3. Collector

Description:

A Silicon PNP transistor in a TO-39 type case designed primarily for amplifier and switching applications. This device features high breakdown voltage, low leakage current. Low capacity, and beta useful over an extremely wide current range.

Maximum Ratings:

| Characteristic | Symbol | Rating | Unit |
|--|------------|-------------|---------------------------|
| Collector-Base Voltage | V_{CBO} | 60 | V |
| Collector-Emitter Voltage | V_{CEO} | | |
| Emitter Base Voltage | V_{EBO} | | |
| Continuous Collector Current | I_C | 1 | A |
| Total Device Dissipation $-(T_A = +25^\circ\text{C})$, Derate Above 25°C | P_D | 0.8 4.56 | W mW/ $^\circ\text{C}$ |
| Total Device Dissipation $-(T_C = +25^\circ\text{C})$, Derate Above 25°C | | 4 22.8 | |
| Operating Junction Temperature Range | T_J | -65 to +200 | $^\circ\text{C}$ |
| Storage Temperature Range, | T_{stg} | | |
| Thermal Resistance, Junction-to-Case | R_{thJC} | 20 | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction-to-Ambient | R_{thJA} | 140 | |
| Lead temperature (During Soldering, 1/16" from case, 60sec max) | T_L | 300 | $^\circ\text{C}$ |

Electrical Characteristics: ($T_C = +25^\circ\text{C}$ Unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Max | Unit |
|-----------|--------|-----------------|-----|-----|------|
|-----------|--------|-----------------|-----|-----|------|

OFF Characteristics

| | | | | | |
|-------------------------------------|---------------|--|----|----|---------------|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 100\text{mA}, I_B = 0$ | 60 | - | V |
| Collector-Base Breakdown Voltage | | $I_C = 100\mu\text{A}, I_B = 0$ | | | |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 100\mu\text{A}, I_C = 0$ | 5 | | |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 50\text{V}, I_E = 0$ | - | 50 | nA |
| | | $V_{CB} = 50\text{V}, I_E = 0, T_A = +150^\circ\text{C}$ | | | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{BE} = 5\text{V}, I_C = 0$ | | 10 | |

ON Characteristics

| | | | | | |
|--------------------------------------|---------------|---|-----|------|---|
| DC Current Gain | h_{FE} | $V_{CE} = 5V, I_C = 100\mu A$ | 75 | - | - |
| | | $V_{CE} = 5V, I_C = 100mA$ | 100 | 300 | |
| | | $V_{CE} = 5V, I_C = 100\mu A, T_A = -55^{\circ}C$ | 40 | - | |
| | | $V_{CE} = 5V, I_C = 500mA$ | 70 | | |
| | | $V_{CE} = 5V, I_C = 1A$ | 40 | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 150mA, I_B = 15mA$ | - | 0.15 | V |
| | | $I_C = 500mA, I_B = 50mA$ | | 0.5 | |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 150mA, I_B = 15mA$ | | 0.9 | |
| Base-Emitter ON Voltage | $V_{BE(on)}$ | $V_{CE} = 500mV, I_C = 500mA$ | | 1.1 | |

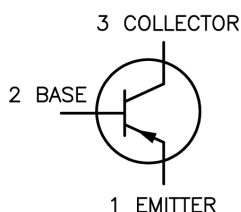
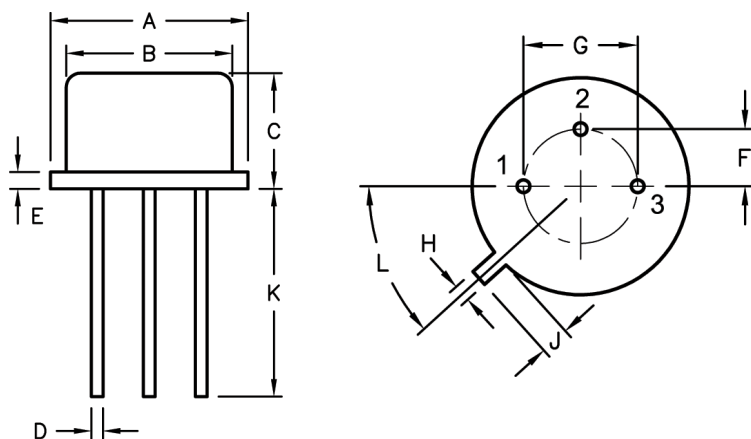
Small - Signal Characteristics

| | | | | | |
|---------------------------|-----------|---|---|-----|-------------|
| Output Capacitance | C_{obo} | $V_{CE} = 10\text{V}, f = 1\text{MHz}$ | - | 20 | pF |
| Input Capacitance | C_{IBO} | $V_{EB} = 500\text{mV}, f = 1\text{MHz}$ | | 110 | |
| Small Signal Current Gain | h_{fe} | $V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 500\text{MHz}$ | 1 | 4 | - |

Switching Characteristics

| | | | | | |
|--------------|----------|---|---|-----|----|
| Storage Time | t_s | $I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$ | - | 350 | ns |
| Turn-On-Time | t_{on} | $I_C = 500\text{mA}, I_{B1} = 50\text{mA}$ | | 100 | |
| Fall Time | t_f | $I_C = 500\text{mA}, I_{B1} = I_{B2} = 50\text{mA}$ | | 50 | |

Power Transistor



| Dim | A | B | C | D | E | F | G | H | J | K | L |
|------|------|------|------|------|------|------|------|------|------|------|-----|
| Min. | 8.5 | 7.74 | 6.09 | 0.4 | - | 2.41 | 4.82 | 0.71 | 0.73 | 12.7 | 42° |
| Max. | 9.39 | 8.5 | 6.6 | 0.53 | 0.88 | 2.66 | 5.33 | 0.86 | 1.02 | - | 48° |

Dimensions : Millimetres

Part Number Table

| Description | Part Number |
|---------------------------------|-------------|
| Transistor, PNP, 1A, 60V, TO-39 | 2N4032 |

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.